

WHAT IS CLAIMED IS:

1. A method of suppressing the immune response in a mammal comprising accelerating lymphocyte homing to any of the mesenteric or peripheral lymph tissues or Peyer's patches by administering an ALH-immunosuppressive compound or composition.
2. A method of suppressing the immune response by accelerating lymphocyte homing to any of the mesenteric or peripheral lymph tissues or Peyer's patches, in a mammal other than rat or dog, comprising administering an ALH-immunosuppressive compound or composition.
3. A method as claimed in claim 1 or 2, wherein the ALH-immunosuppressive compound or composition comprises a 2-aminopropane-1,3-diol compound or a homolog or analog thereof, or a benzene compound or a homolog or analog thereof.
4. A method as claimed in claim 1 or 2, wherein the ALH-immunosuppressive compound or composition comprises
2-amino-2[2-(4-octylphenyl)ethyl]propane-1,3-diol hydrochloride (FTY720).
5. A method as claimed in claim 1 or 2, wherein the method is part of a therapeutic treatment of the mammal.

6. A method as claimed in claim 5, wherein the therapeutic treatment comprises suppressing the rejection of an organ, cell, or bone marrow transplantation.

7. A method as claimed in claim 5, wherein the therapeutic treatment comprises the prevention or treatment of graft-versus-host diseases.

8. A method as claimed in claim 5, wherein the therapeutic treatment comprises the prevention or treatment of an autoimmune disease.

9. A method as claimed in claim 8, wherein the autoimmune disease is one or more of rheumatoid arthritis, psoriasis, atopic dermatitis, bronchial asthma, pollinosis, Behcet's disease, uveitis, systemic lupus erythematosus, and multiple sclerosis.

10. A method for accelerating the lymphocyte homing activity of the immune system of a mammal, while simultaneously maintaining the IL-2 mRNA expressing ability of T cells in the mammal, comprising introducing an ALH-immunosuppressive composition comprising a 2-aminopropane-1,3-diol compound or a homolog or analog thereof, or a benzene compound or a homolog or analog thereof, to the mammal.

11. A method as claimed in claim 10, wherein the ALH-immunosuppressive composition comprises 2-amino-2[2-(4-octylphenyl)ethyl]propane-1,3-diol hydrochloride (FTY720).

12. A method for reversibly reducing the number of circulating lymphocytes in a mammal other than rat or dog, comprising introducing an ALH-immunosuppressive composition comprising a 2-aminopropane-1,3-diol compound, or a homolog or analog thereof, or a benzene compound, or a homolog or analog thereof, to the mammal, wherein a measurable amount of the circulating lymphocytes are directed to peripheral or mesenteric lymphoid tissue.

13. A method as claimed in claim 12, wherein the ALH-immunosuppressive composition comprises 2-amino-2[2-(4-octylphenyl)ethyl]propane-1,3-diol hydrochloride (FTY720).

14. An ALH-immunosuppressive composition comprising a 2-aminopropane-1,3-diol compound, or a homolog or analog thereof, or a benzene compound, or a homolog or analog thereof, wherein the composition does not contain cyclosporin A, and a pharmaceutically acceptable carrier.

15. A composition as claimed in claim 14, further comprising at least one immunosuppressive compound other than cyclosporin A.

16. A composition as claimed in claim 15, wherein said at least one immunosuppressive compound is a cyclosporin derivative.

17. A composition as claimed in claim 15, wherein said at least one immunosuppressive compound is tacrolimus.

18. A composition as claimed in claim 15, wherein said at least one immunosuppressive compound is a mycophenolate derivative.

19. A method for identifying the presence or absence of ALH-immunosuppressive activity in a sample comprising providing a mammal with transplanted tissue or cells, administering the sample to the mammal, assaying for the survival of the transplanted tissue or cells in the mammal following the administration, and assaying for the amount of circulating blood lymphocytes to the amount of lymphocytes in peripheral or mesenteric lymphoid tissue in the mammal.

20. A method as claimed in claim 19, wherein the mammal is a rodent.

21. A method as claimed in claim 19, wherein the transplanted tissue is selected from the group consisting of heart, skin, or kidney.

22. A method for identifying the presence or absence of ALH-immunosuppressive activity in a sample, comprising introducing pre-labeled lymphocytes into a mammal, administering the sample to the mammal, detecting the

presence or absence of pre-labeled lymphocytes in tissue and blood samples of the mammal and comparing the level detected to a control mammal.

23. A method as claimed in claim 22, wherein the mammal is a rodent.

24. A method as claimed in claim 22, wherein the pre-labeled lymphocytes are labeled with calcien.

25. A method as claimed in claim 22, wherein the pre-labeled lymphocytes contain a genetic sequence label.

26. A method of manipulating lymphocyte traffic in a mammal comprising administering a composition comprising an ALH-immunosuppressive compound.

27. A method as claimed in claim 26, further comprising administering an antibody to the mammal.

28. A method as claimed in claim 27, wherein the antibody is an anti-lymphocyte antibody or an antibody direct against a lymphocyte homing receptor.